

Claims

[c1] 1.A method for software deployment in a data communications network that comprises an Initiator having an address, a Service Provider, and at least one Peer having an address, the method comprising the steps of:

- sending a service request comprising the address of the at least one Peer from the Initiator to the Service Provider;
- sending an invitation for the service from the Service Provider to the at least one Peer;
- if the at least one Peer accepts the service, sending an accept service message from the at least one Peer to the Service Provider;
- building by the Service Provider the software for the service;
- distributing by the Service Provider the software to the Initiator and the Peer;
- installing the software by the Initiator;
- installing the software by the at least one Peer; and
- initiating the service.

[c2] 2.The method for software deployment according to claim 1, further comprising, prior to the step of sending an invitation from the Service Provider to the at least one Peer, the step of registering by the Service Provider the service request.

[c3] 3.The method for software deployment according to claim 1, further comprising, prior to the step of installing the software by the Initiator, the step of authenticating the software by the Initiator.

[c4] 4.The method for software deployment according to claim 1, further comprising, prior to the step of installing the software by the at least one Peer, the step of authenticating the software by the at least one Peer.

[c5] 5.The method for software deployment according to claim 1, further comprising, prior to the step of sending a service request comprising the address of the at least one Peer from the Initiator to the Service Provider, the steps of:

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- selecting by the Initiator a service;
- sending an interface request relating to the selected service from the Initiator to the Service Provider;
- sending the requested interface from the Service Provider to the Initiator; and
- preparing by the Initiator a service request using the interface.

[c6] 6.The method for software deployment according to claim 5, further comprising, prior to the step of sending the requested interface from the Service Provider to the Initiator, the step of authenticating by the Service Provider the interface request.

[c7] 7.The method for software deployment according to claim 1, further comprising, after the step of initiating the service, the steps of:

- terminating the service; and
- sending a final accounting message from the Initiator to the Service Provider.

[c8] 8.The method for software deployment according to claim 7, further comprising, prior to the step of terminating the service, the step of sending at least one interim accounting message from the Initiator to the Service Provider.

[c9] 9.The method for software deployment according to claim 1, further comprising, after the step of terminating the service, the step of removing by the Initiator the software.

[c10] 10.The method for software deployment according to claim 1, further comprising, after the step of terminating the service, the step of removing by the at least one Peer the software.

[c11] 11.The method for software deployment according to claim 5, wherein the interface request comprises:

- the address of the Initiator;
- a unique identifier for the interface request;

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- an indication of the requested service;
- a random number to be used for authentication; and
- an electronic signature that authenticates the Initiator to the Service Provider.

[c12] 12.The method for software deployment according to claim 11, wherein the indication of the requested service comprises options relevant for the presentation of the requested service.

[c13] 13.The method for software deployment according to claim 11, wherein the interface comprises:

- the unique identifier from the Interface Request;
- the requested service interface;
- a random value;
- a key;
- an electronic signature that authenticates the Service Provider to the Initiator.

[c14] 14.The method for software deployment according to claim 13 wherein the service request comprises:

- the unique identifier in the interface request;
- a unique identifier for the service request;
- an identification of the requested service;
- an electronic signature that authenticates the Initiator to the Service Provider; and
- a list of at least one Peer, for each Peer comprising:
 - the address of the Peer;
 - a notification describing the service;
 - an identifier of the Initiator;
 - the key from the interface; and
 - an electronic signature that authenticates the Initiator.

[c15] 15.The method for software deployment according to claim 14, wherein the identification of the requested service comprises configuration options.

[c16] 16. The method for software deployment according to claim 15, wherein the invitation comprises:

- a unique identifier for the invitation;
- the identification of the offered service with the configuration options;
- an interface;
- the address of the Initiator;
- the identifier of the Initiator;
- information about who the Initiator is and what the service is;
- the key from the interface; and
- an electronic signature authenticating the Initiator to the at least one Peer.

[c17] 17. A system for software deployment in a data communications network, the system comprising:

- an Initiator, having an address, that:
- sends a service request comprising the address of at least one Peer to a Service Provider; and
- installs software received from the Service Provider;
- a Service Provider that:
- sends an invitation for the service to the at least one Peer;
- builds the software for the service; and
- distributes the software to the Initiator and the at least one Peer; and
- at least one Peer, having an address, that:
- sends an accept service message to the Service Provider; and
- installs software received from the Service Provider.

[c18] 18. The system for software deployment according to claim 17, wherein the Service Provider further registers the service request.

[c19] 19. The system for software deployment according to claim 17, wherein the Initiator further authenticates the software.

[c20] 20. The system for software deployment according to claim 17, wherein the at least one Peer further authenticates the software.

[c21] 21.The system for software deployment according to claim 17, wherein:
– the Initiator further:
– selects a service;
– sends an interface request relating to the selected service to the Service Provider; and
– prepares a service request using the interface; and
– the Service Provider further sends the requested interface to the Initiator.

[c22] 22.The system for software deployment according to claim 21, wherein the Service Provider further authenticates the interface request.

[c23] 23.The system for software deployment according to claim 17, wherein the Initiator further sends a final accounting message to the Service Provider.

[c24] 24.The system for software deployment according to claim 23, wherein the Initiator further sends at least one interim accounting message to the Service Provider.

[c25] 25.The system for software deployment according to claim 17, wherein the Initiator further removes the software.

[c26] 26.The system for software deployment according to claim 17, wherein the at least one Peer further removes the software.

[c27] 27.The system for software deployment according to claim 21, wherein the interface request comprises:
– the address of the Initiator;
– a unique identifier for the interface request;
– an indication of the requested service;
– a random number to be used for authentication; and
– an electronic signature that authenticates the Initiator to the Service Provider.

[c28] 28.The system for software deployment according to claim 27, wherein the indication of the requested service comprises options relevant for the

presentation of the requested service.

[c29] 29.The system for software deployment according to claim 27, wherein the interface comprises:

- the unique identifier from the Interface Request;
- the requested service interface;
- a random value;
- a key;
- an electronic signature that authenticates the Service Provider to the Initiator.

[c30] 30.The system for software deployment according to claim 29 wherein the service request comprises:

- the unique identifier in the interface request;
- a unique identifier for the service request;
- an identification of the requested service;
- an electronic signature that authenticates the Initiator to the Service Provider; and
- a list of at least one Peer, for each peer comprising:
 - the address of the Peer;
 - a notification describing the service;
 - an identifier of the Initiator;
 - the key from the interface; and
 - an electronic signature that authenticates the Initiator.

[c31] 31.The system for software deployment according to claim 30, wherein the identification of the requested service comprises configuration options.

[c32] 32.The system for software deployment according to claim 31, wherein the invitation comprises:

- a unique identifier for the invitation;
- the identification of the offered service with the configuration options;
- an interface;
- the address of the Initiator;

- the identifier of the Initiator;
- information about who the Initiator is and what the service is;
- the key from the interface; and
- an electronic signature authenticating the Initiator to the at least one Peer.

[c33] 33. An Initiator of software deployment in a data communications network that further comprises a Service Provider, and at least one Peer having an address, the Initiator comprising:

- a communication unit that:
- sends a service request comprising the address of the at least one Peer to the Service Provider; and
- receives the software for the service from the Service Provider; and
- a processing unit that:
- installs the software.

[c34] 34. The Initiator of software deployment according to claim 33, wherein the processing unit further authenticates the software.

[c35] 35. The Initiator of software deployment according to claim 33, wherein:

- the processing unit further:
- selects a service; and
- prepares a service request using the interface; and
- the communication unit further:
- sends an interface request relating to the selected service from the Initiator to the Service Provider; and
- sends the requested interface from the Service Provider to the Initiator.

[c36] 36. The Initiator of software deployment according to claim 33, wherein the communication unit further sends a final accounting message to the Service Provider.

[c37] 37. The Initiator of software deployment according to claim 33, wherein the communication unit further sends at least one interim accounting message to the Service Provider.

[c38] 38.The Initiator of software deployment according to claim 33, wherein the processing unit further removes the software.

[c39] 39.A Peer in software deployment in a data communications network that further comprises an Initiator and a Service Provider, wherein the Peer comprises:
– a communication unit that:
– receives an invitation from the Service Provider;
– sends an accept service message to the Service Provider; and
– receives software from the Service Provider; and
– a processing unit that:
– installs the software.

[c40] 40.The Peer in software deployment according to claim 39, wherein the processing unit further authenticates the software.

[c41] 41.The Peer in software deployment according to claim 39, wherein the processing unit further removes the software.

[c42] 42.A Service Provider for software deployment in a data communications network, the network further comprising an Initiator and at least one Peer having an address, the Service Provider comprising:
– a communication unit that:
– receives a service request comprising the address of the at least one Peer from the Initiator;
– sends an invitation to the at least one Peer;
– receives an accept service message from the at least one Peer; and
– distributes the software to the Initiator and the at least one Peer; and
– a processing unit that:
– builds the software for the service.

[c43] 43.The Service Provider for software deployment according to claim 42, wherein the processing unit further registers the service request.

[c44] 44.The Service Provider for software deployment according to claim 42,

wherein the communication unit further:

- receives an interface request relating to the selected service from the Initiator; and
- sends the requested interface to the Initiator.

[c45] 45.The Service Provider for software deployment according to claim 44, wherein the processing unit further authenticates the interface request.

[c46] 46.The Service Provider for software deployment according to claim 42, wherein the communication unit further receives a final accounting message from the Initiator.

[c47] 47.The Service Provider for software deployment according to claim 46, wherein the communication unit further receives at least one interim accounting message from the Initiator.